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FIG. 1

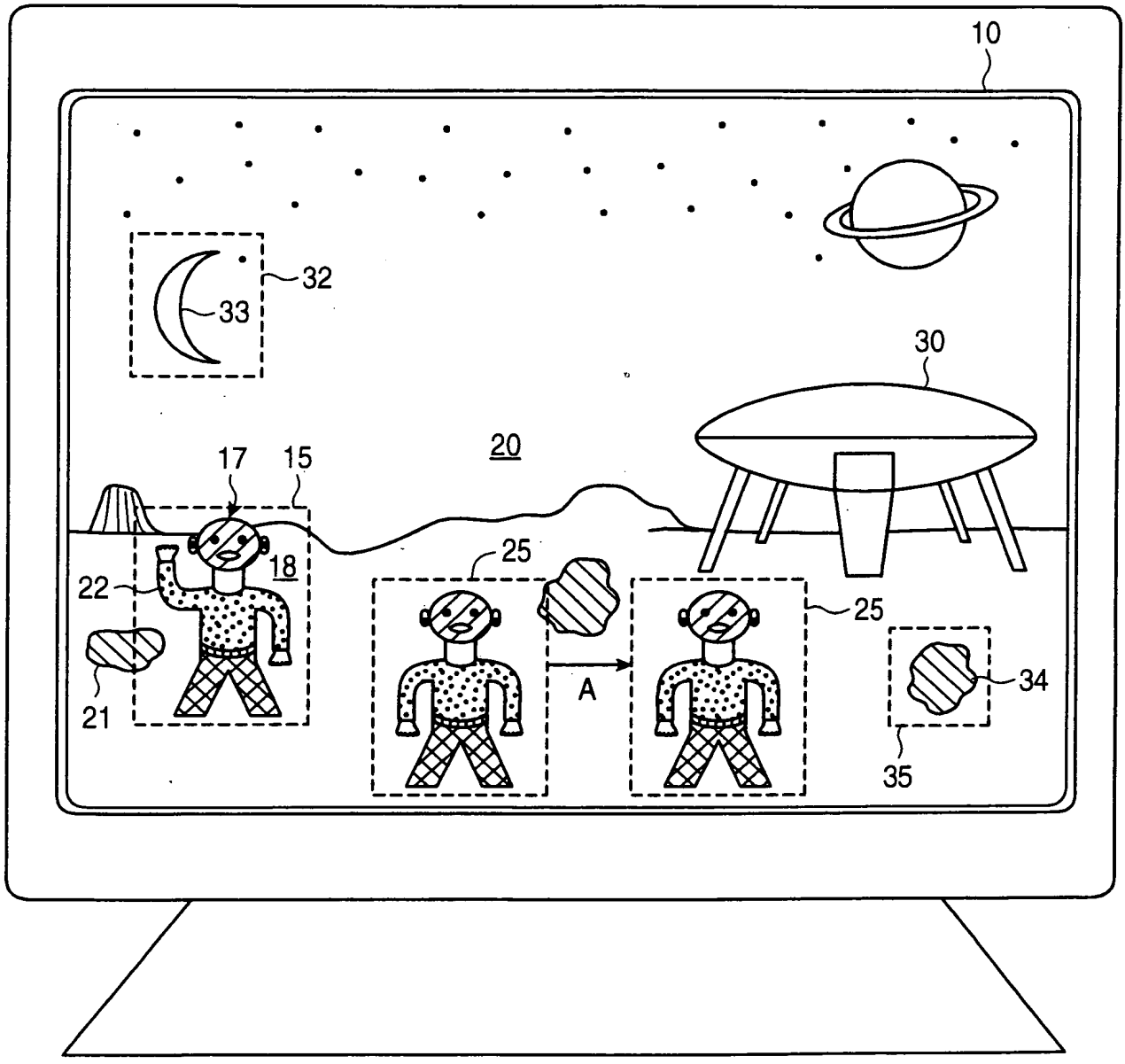
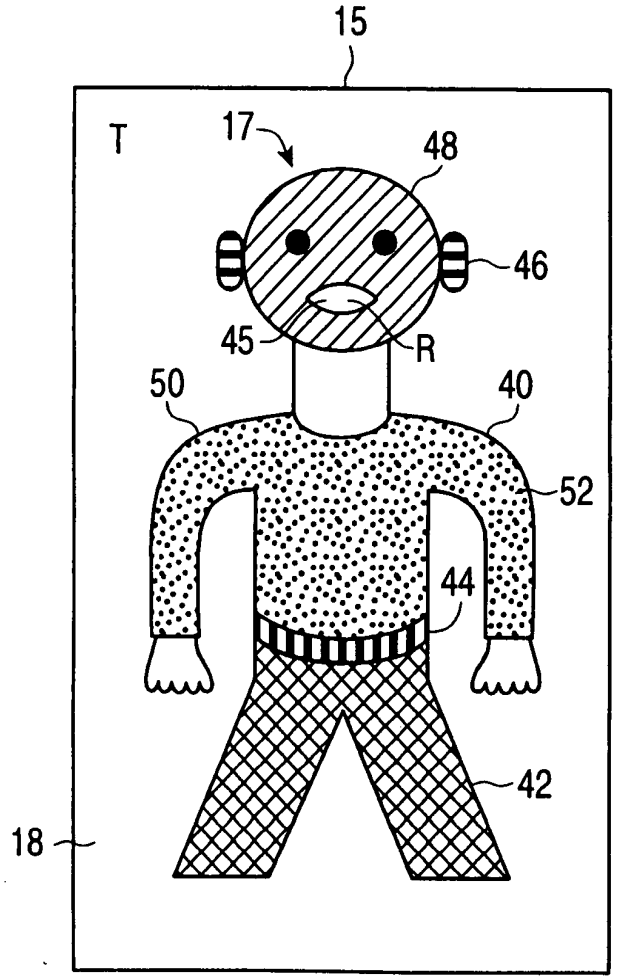


FIG. 2


15
T
17
48
46
45
R
50
40
52
44
42
18

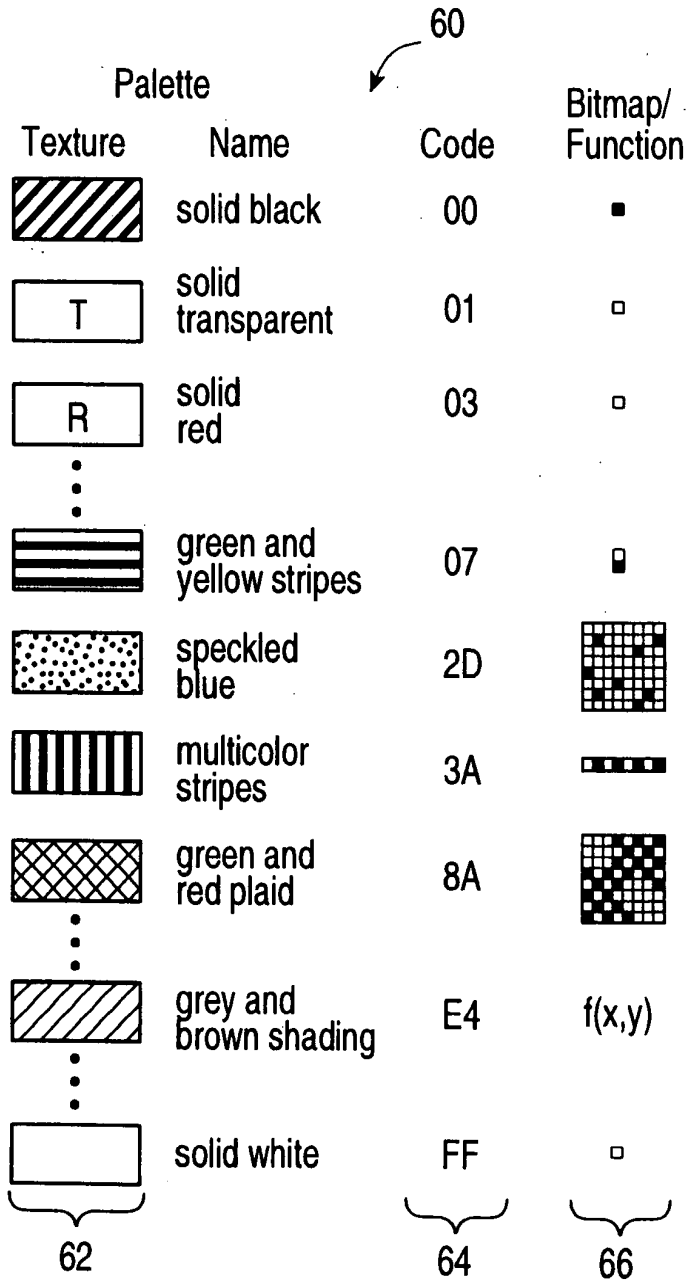

60
Palette
Texture
Name
Code
Bitmap/
Function
solid black
00
T
solid
transparent
01
R
solid
red
03
green and
yellow stripes
07
speckled
blue
2D
multicolor
stripes
3A
green and
red plaid
8A
grey and
brown shading
E4
f(x,y)
solid white
FF
62
64
66

FIG. 3

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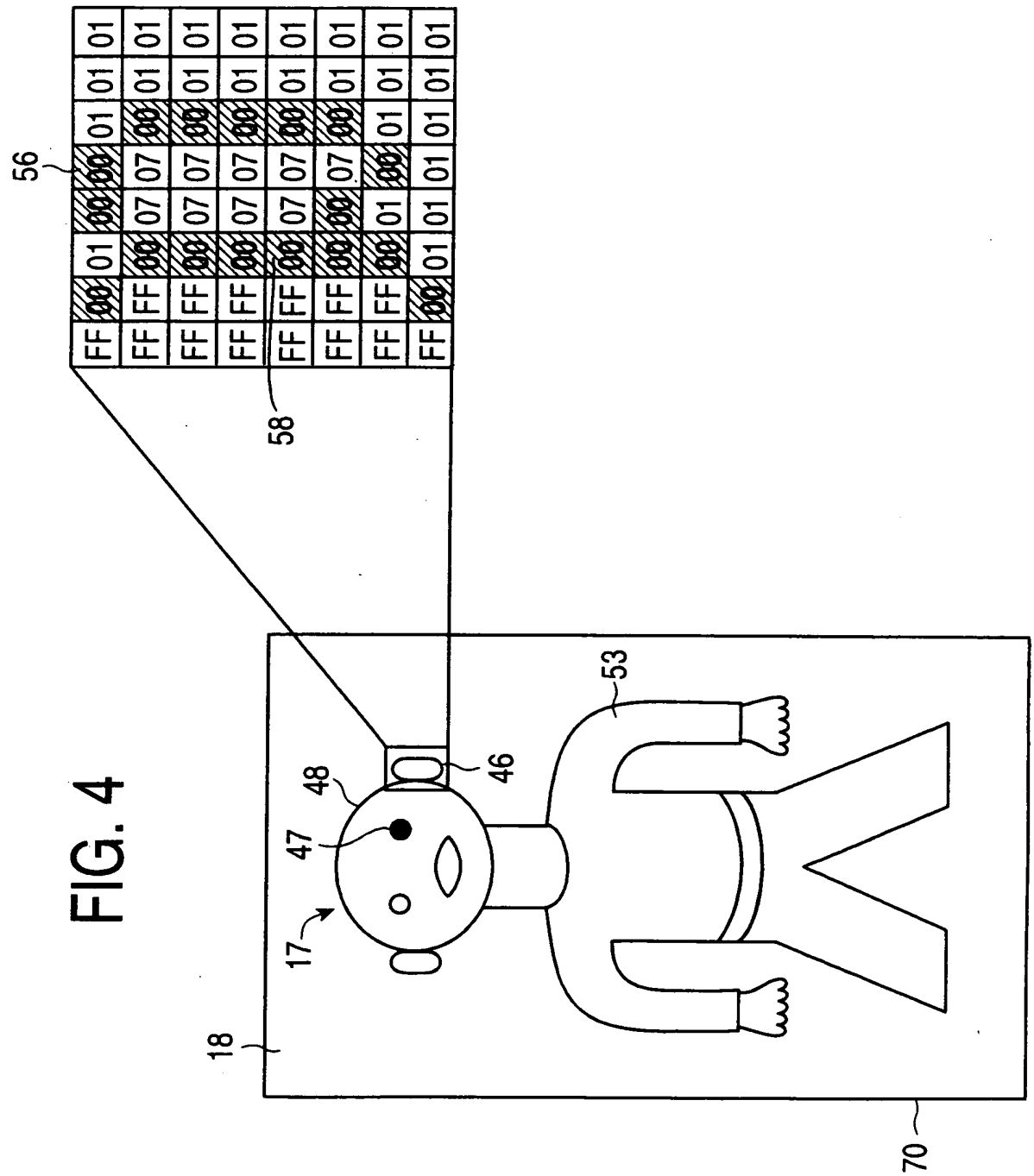
56
58
FF 00 01 00 01 01
FF FF 00 07 00 01
FF FF 00 07 00 01
FF FF 00 07 00 01
FF FF 00 07 00 01
FF FF 00 07 00 01
FF FF 00 01 00 01
FF 00 01 01 01 01
46
48
47
17
53
18
70

FIG. 4

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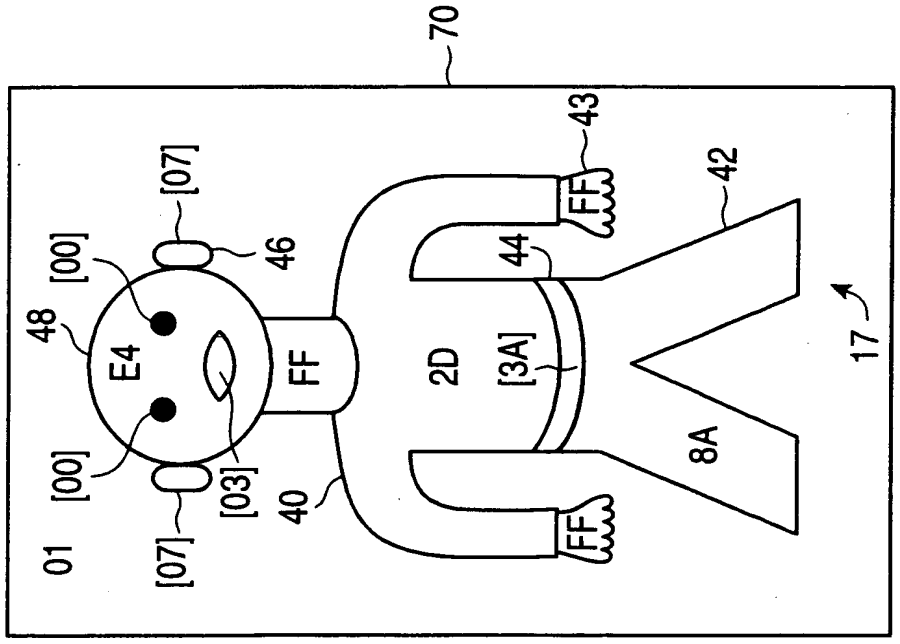
FIG. 5



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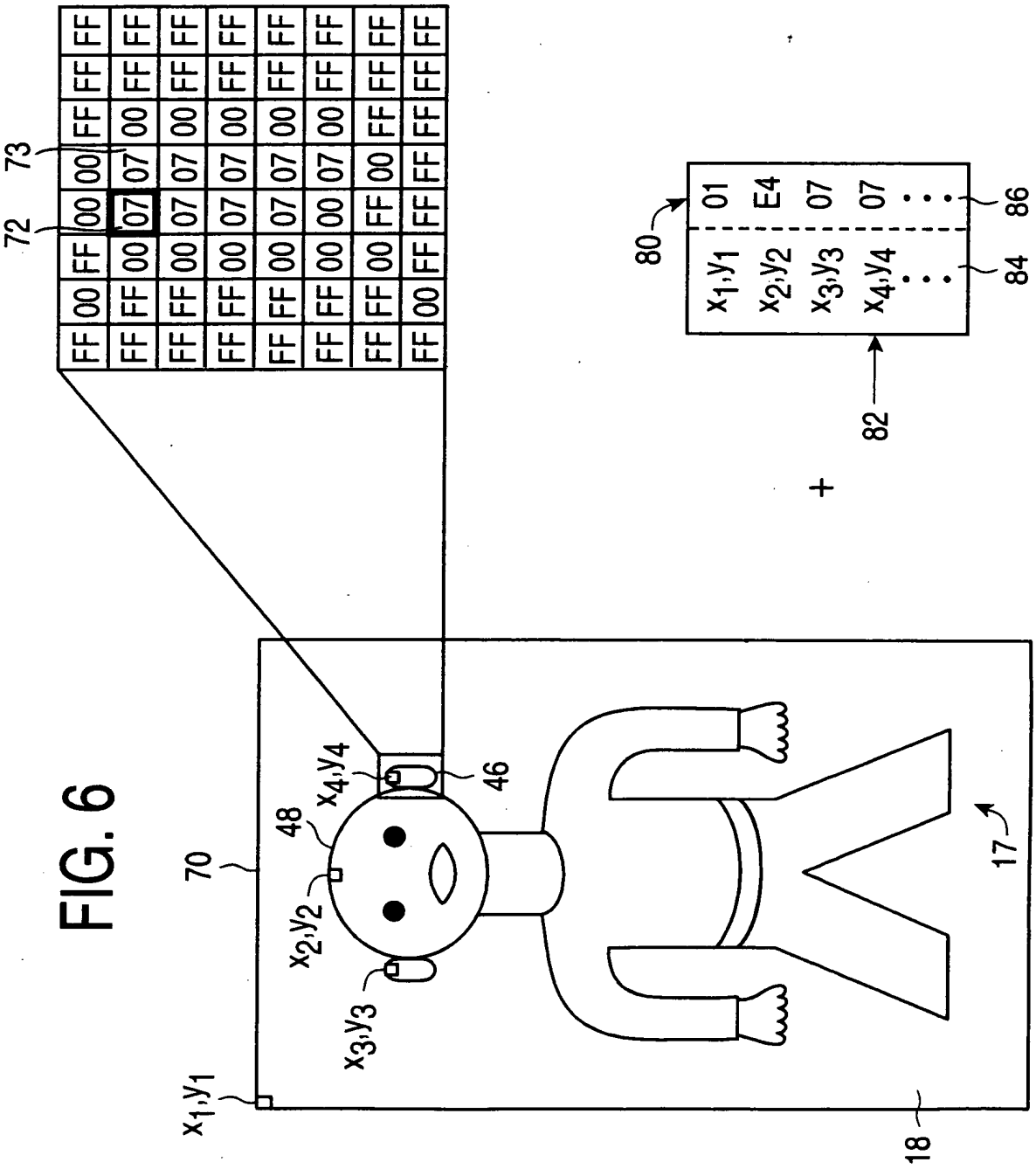
FF FF FF FF FF FF FF FF FF FF
FF FF FF FF FF FF FF FF FF FF
FF FF FF FF FF FF FF FF FF FF
00 00 00 00 00 00 00 00 FF FF
00 07 07 07 07 07 07 00 FF FF
FF 00 00 00 00 00 00 FF FF FF
00 FF FF FF FF FF FF 00 FF FF
73
72
80
01 E4 07 07
86
x_1,y_1 x_2,y_2 x_3,y_3 x_4,y_4
84
82
+
70
48
x_4,y_4
46
x_2,y_2
x_3,y_3
x_1,y_1
17
18

FIG. 6

FIG. 7

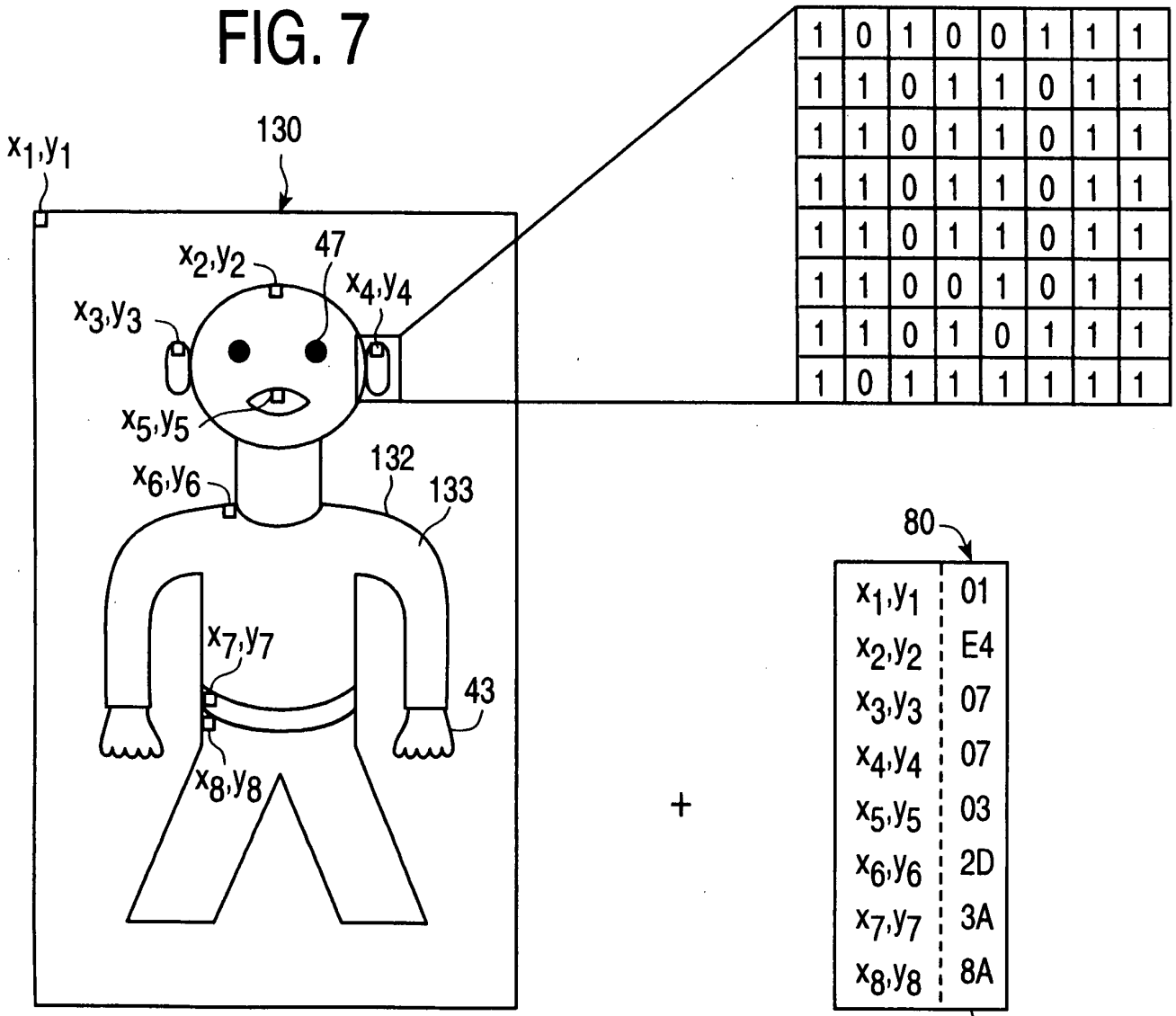
x_1,y_1
130
x_2,y_2
47
x_4,y_4
x_3,y_3
x_5,y_5
x_6,y_6
132
133
x_7,y_7
43
x_8,y_8
1 0 1 0 0 1 1 1
1 1 0 1 1 0 1 1
1 1 0 1 1 0 1 1
1 1 0 1 1 0 1 1
1 1 0 1 1 0 1 1
1 1 0 0 1 0 1 1
1 1 0 1 0 1 1 1
1 0 1 1 1 1 1 1
+
80
x_1,y_1 01
x_2,y_2 E4
x_3,y_3 07
x_4,y_4 07
x_5,y_5 03
x_6,y_6 2D
x_7,y_7 3A
x_8,y_8 8A
86

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FIG. 8

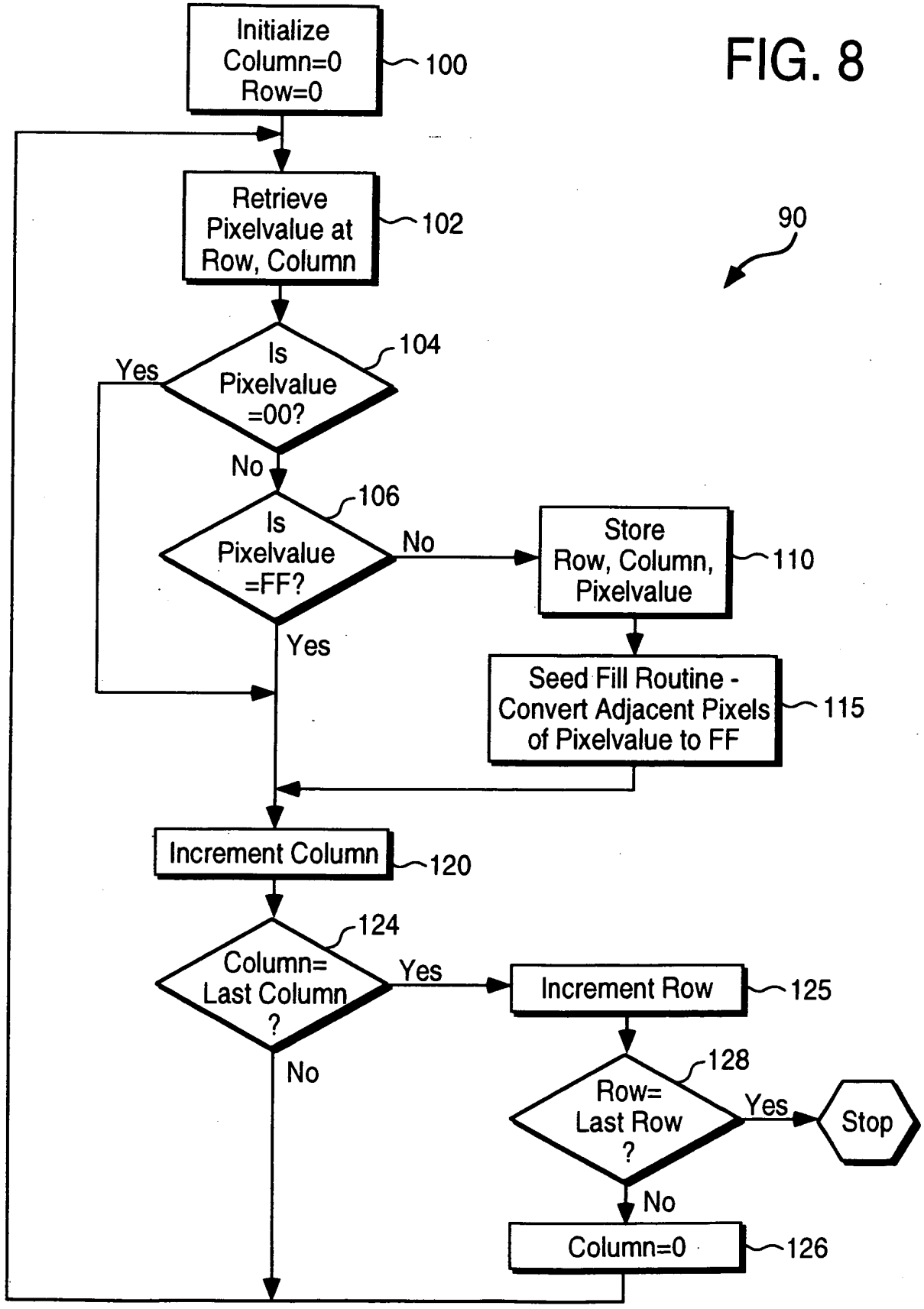
Initialize
Column=0
Row=0
100
Retrieve
Pixelvalue at
Row, Column
102
90
Is
Pixelvalue
=00?
104
Yes
No
Is
Pixelvalue
=FF?
106
No
Store
Row, Column,
Pixelvalue
110
Yes
Seed Fill Routine -
Convert Adjacent Pixels
of Pixelvalue to FF
115
Increment Column
120
Column=
Last Column
?
124
Yes
Increment Row
125
No
Row=
Last Row
?
128
Yes
Stop
No
Column=0
126

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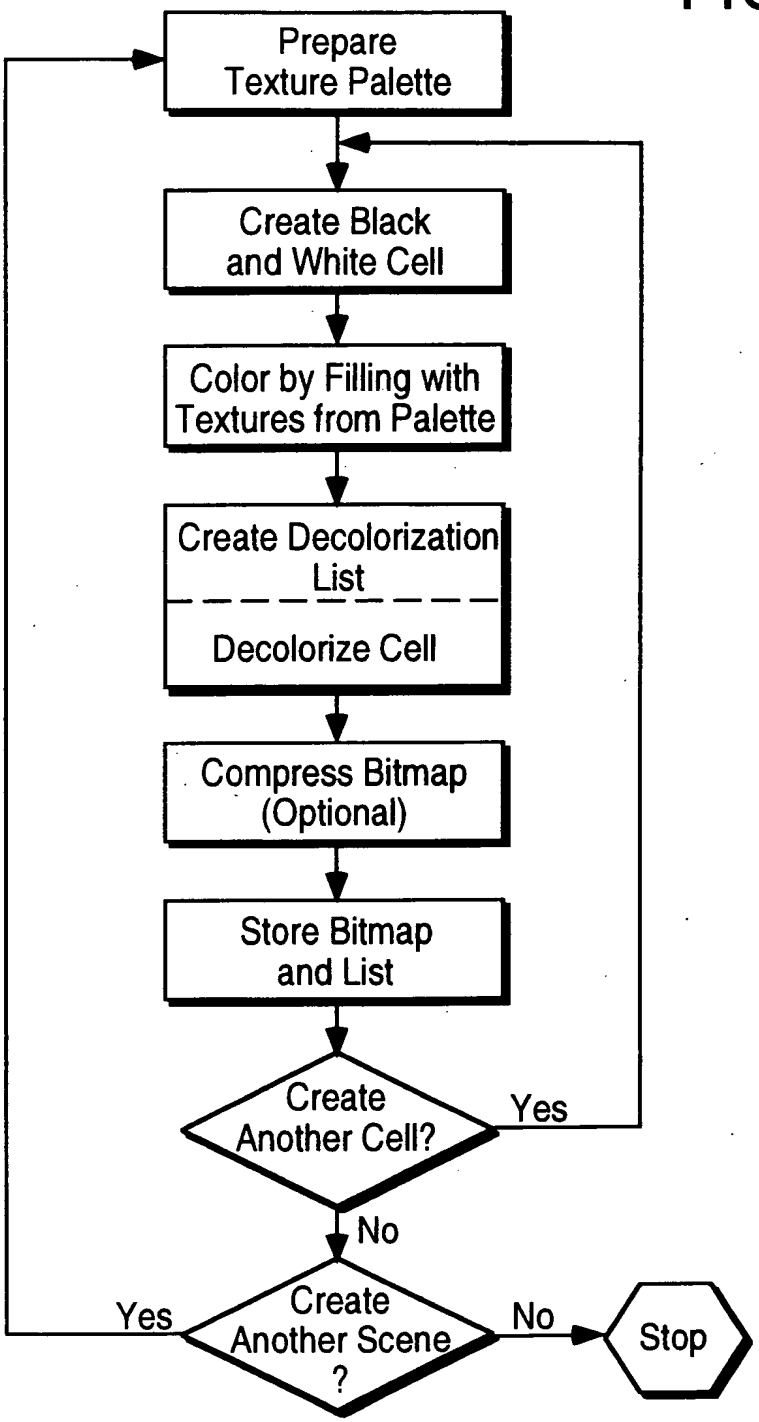
FIG. 9


Prepare Texture Palette
Create Black and White Cell
Color by Filling with Textures from Palette
Create Decolorization List
Decolorize Cell
Compress Bitmap (Optional)
Store Bitmap and List
Create Another Cell?
Yes
No
Create Another Scene ?
Yes
No
Stop

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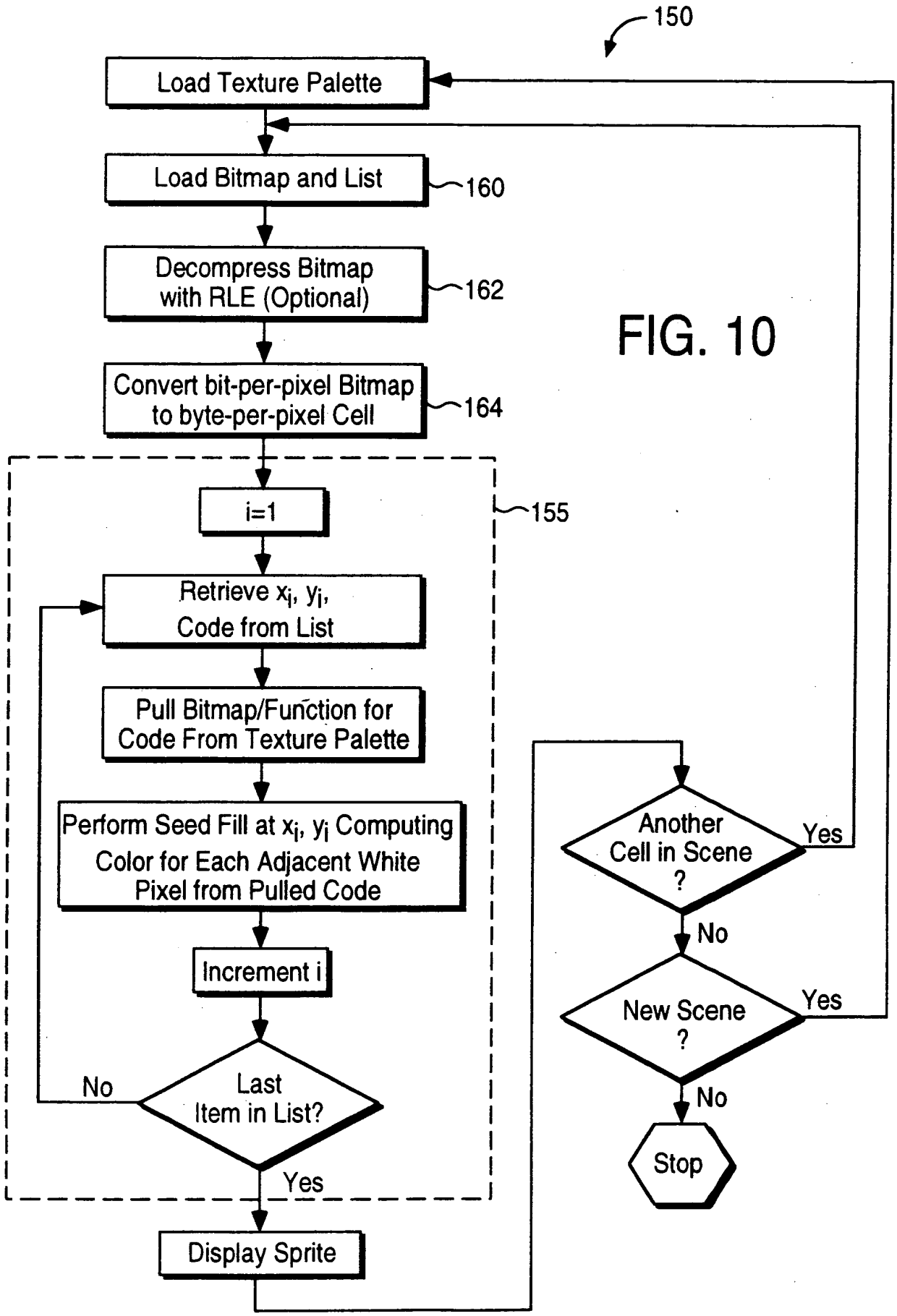
150
Load Texture Palette
Load Bitmap and List
160
Decompress Bitmap with RLE (Optional)
162
Convert bit-per-pixel Bitmap to byte-per-pixel Cell
164
155
i=1
Retrieve x_i, y_i, Code from List
Pull Bitmap/Function for Code From Texture Palette
Perform Seed Fill at x_i, y_i Computing Color for Each Adjacent White Pixel from Pulled Code
Increment i
Last Item in List?
No
Yes
Display Sprite
Another Cell in Scene ?
Yes
No
New Scene ?
Yes
No
Stop

FIG. 10

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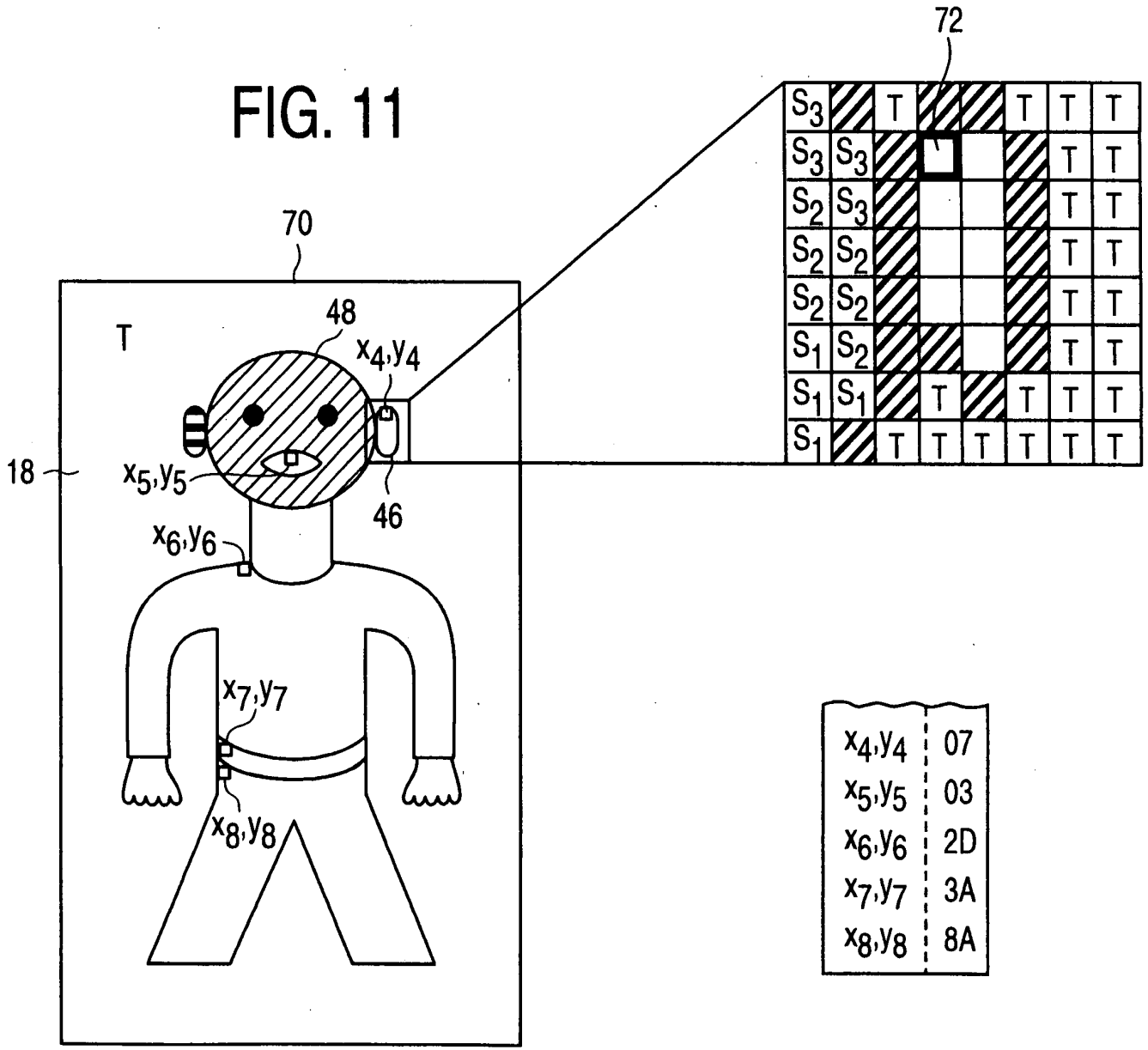
FIG. 11


72
70
48
T
x_4,y_4
18
x_5,y_5
46
x_6,y_6
x_7,y_7
x_8,y_8
S_3 T T T T T
S_3 S_3 T T T T
S_2 S_3 T T T T
S_2 S_2 T T T T
S_2 S_2 T T T T
S_1 S_2 T T T T
S_1 S_1 T T T T T
S_1 T T T T T T
x_4,y_4 07
x_5,y_5 03
x_6,y_6 2D
x_7,y_7 3A
x_8,y_8 8A

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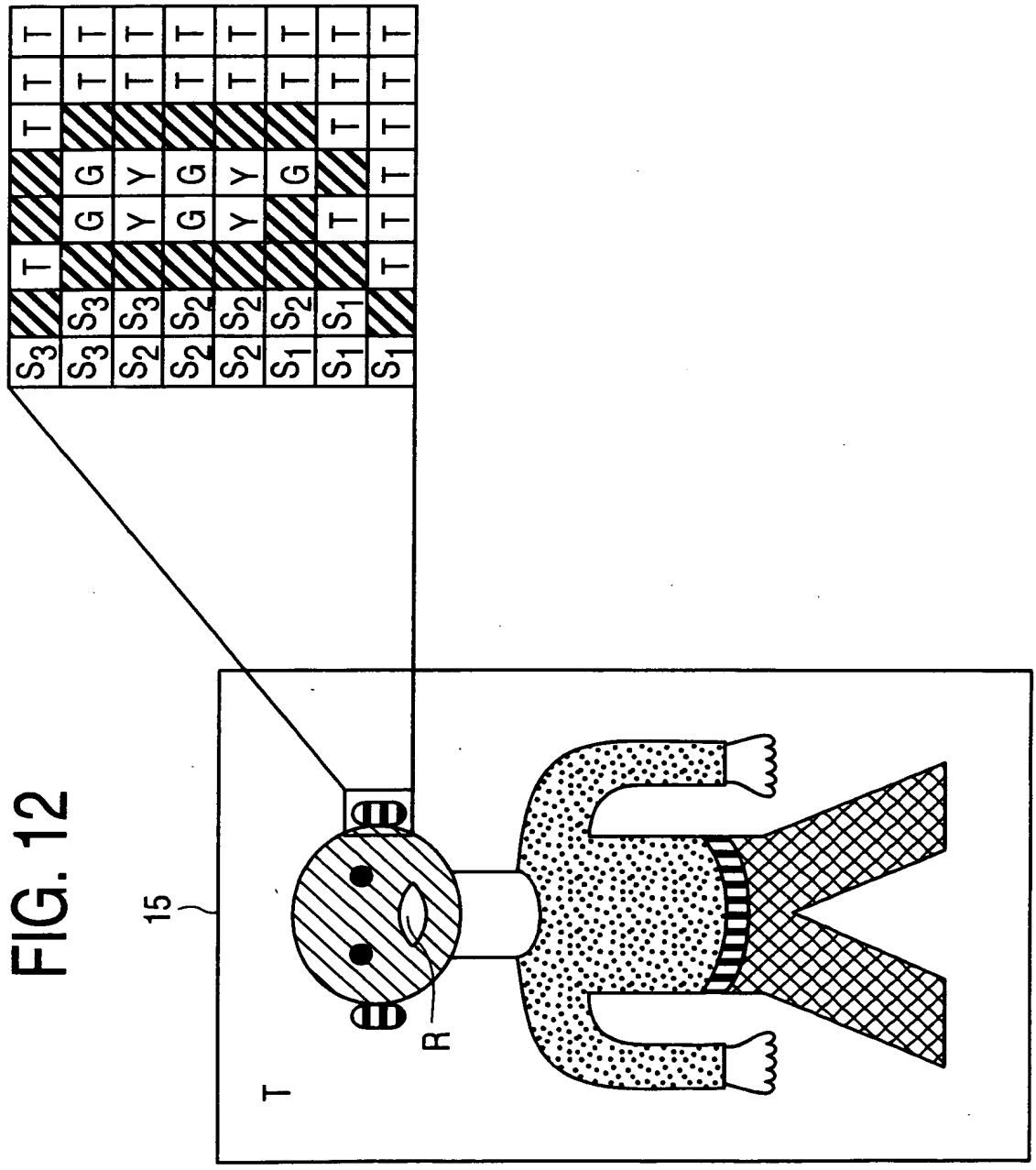
S3 S3 S2 S2 S2 S1 S1 S1
T T T T T T T T
T T T T T T T T
T T T T T T T T
T G G Y G Y G T
T G Y G Y G T T
T T T T T T T T
T T T T T T T T
T T T T T T T T
15
R
T

FIG. 12